Lesson Title: May the FORCE be with you.

Related Lessons: Balanced/Unbalanced forces and Gravity

Grade Level: Middle grades

Unit: 05- Force and Motion

GOALS

Content Standards:

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|  | »  [SC.6.P.13.1: Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.](javascript:__doPostBack('ctl00$ContentPlaceHolder1$FlStandardSearch$StandUc1$BenchmarkGrid$ctl00$ctl05$HyperLink2','')) |

ISTE NETS-S

* 1. Creativity and innovation
* 2. Communication and collaboration
* 3. Research and information fluency
* 4. Critical thinking, problem solving, and decision making
* 5. Digital citizenship
* 6. Technology operations and concepts

Instructional Objectives:

The purpose of this lesson is to engage students more deeply in their understanding of forces.

ACTION

**Before-Class Preparation:** Create a handout or guiding chart for students to complete as they go through the entire assignment.

**During Class:**

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| Time | Instructional Activities | Materials & Resources |
| 20-25 minutes | **Teacher will introduce forces to students with a PowerPoint presentation. Students will take notes as important information is given.** | **Classroom projector, PowerPoint, teacher created presentation** |
| 20-25  minutes | **Teacher will demonstrate how to get to Webquest for motion.**  [**http://glencoe.mcgraw-hill.com/sites/007877846x/student\_view0/unit4/webquest.html**](http://glencoe.mcgraw-hill.com/sites/007877846x/student_view0/unit4/webquest.html)  **Students will be given handout which will organize the steps of the process.** | **Student computers, teacher computer, handout** |
| 45 minutes | **Students will research roller coasters and understand motion** | **Computers, handouts** |
| 45 minutes | **Students will spend period creating a virtual rollercoaster and plan on how to create a model. With their groups students will create a list of materials that can be used for their model.** | **Computers, handout** |
| 45 minutes | **Groups will create and test their models.** | **Materials from group created lists** |
| 45 minutes | **Groups will present their findings to the class.** | **Model rollercoaster’s** |
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**MONITER**

Ongoing Assessment: Monitor student progress during WebQuest being sure each student is participating. Students will be required to complete each step of the handout to show learning throughout the process. Students will be grouped and will use grouping cards to decide on jobs.

Accommodations and Extensions: Students with special needs will be working in groups to assist with any needs. These students will also be placed in locations that will be accessible for better viewing of presentation.

Backup Plan: Each of the research areas can be done as a class and students can fill in handout as a group upon completion of the sections.

EVALUATION

**Lesson Reflections and Notes:** Students are evaluated through group participation in class presentations, note-taking, and completion of handout.